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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/600,654	10/02/2000	Michael James Knee	87805-9010	9007

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EXAMINER	
VO, TUNG T	

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/600,654	KNEE, MICHAEL JAMES	
	Examiner	Art Unit	
	Tung Vo	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-10,12,14,15 and 17-19* is/are pending in the application.

4a) Of the above claim(s) *1,11,13, 16, 20-24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-10,12,14,15 and 17-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

by

DETAILED ACTION

Withdrawn Allowable Subject Matter

1. The indicated allowability of claims 12 is withdrawn in view of the newly discovered reference(s) to Dieterich (US 6,100,940). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 2-5, 6-10, 12, 14-15, 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohsawa (US 5,790,195) in view of Dieterich (US 6,100,940).

Re claims 3, 6, 9, 12, 14-15 and 19, Ohsawa teaches a video signal comprising the steps of: in compression coding step (22 and 35 of fig. 1), analyzing an input video signal at a picture rate and at a macroblock rate (11 and 12 of fig. 1), and taking compression coding decisions (13 of fig. 1) including picture rate coding decisions and macroblock rate coding decisions; forming a presentation of the coding decisions (the output of the decision circuit 13, col. 6, lines 5-11); outputting said representations from the compression coding step (13 of fig. 1) and passing the representation along a video pathway with input video signal (22, 10, 31-35 of fig. 1)); and downstream of the video pathway compression encoding the input video signal in accordance

with said coding decisions (34 of fig. 5, e.g. encoding the video input based on the coding decisions).

Moreover, Ohsawa teaches a compression pre-processing apparatus (11-13, 30, 31, and 38 of fig. 1) comprising: coding means (11-13 of fig. 1) for analyzing a video signal at a picture rate (10 of fig. 1) and at a macroblock rate (11-12 of fig. 1) and taking compression coding decisions (13 of fig. 1) including picture rate coding decisions and macroblock coding decisions means (13 of fig. 1) for processing the coding decisions and means (13 of fig. 1) for outputting, from the compression pre-processing apparatus, the processed coding decisions for passage with the video signal along a video pathway (the decisions from the output of the decision circuit 13 of fig. 1, and the video input signal from the input unit 22 of fig.1,wherein the encoder (34 of fig. 1) for encoding the video input with the decisions information).

It is noted that Ohsawa does not particularly teach wherein input video signal is pass along the video pathway with the representation of the coding decision undergoes no processing other than delay; analysis generates information relating the picture size and type; and the selection of a macro-block prediction mode as claimed.

However, Dieterick teaches wherein input video signal is pass along the video pathway with the representation of the coding decision undergoes no processing other than delay (VIDEO 145, DELAY 170, DELAYED 175 of fig. 1; there is not processing other than delay of the video 145 during that stage); analysis generates information relating the picture size and type (610 of fig. 6; Note MPEG-2 has an identified size and type of I, P, or B frames); and the selection of a macro-block prediction mode (650 of fig. 6, Note MPEG-2 encoder has a function to predict Inter or Intra frames (I and P or B frames).

Therefore taking the teachings of Ohsawa and Dieterick as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the delayed video (170 and 175 of fig. 1) into the compression pre-processing apparatus of Ohsawa for the same purpose of delaying the video signal to improve a subsequent coding of the incoming or pre-recorded image sequence. Doing so would reduce the computation of an encoder.

Re claim 2, Ohsawa further teaches wherein said representation of the coding decision comprises an information bus (an (A) value of fig. 2) in which the coding decisions are represented in the same format as they are represented in the compressed bit-stream which is the output of said downstream compression coding operation (VLC 34 of fig. 1).

Re claim 4, Ohaswa further teaches wherein analysis comprises the generation of candidate of a motion vector (38 of fig. 1).

Re claim 5, Ohsawa further teaches wherein analysis comprises the selection for each macro-block of the picture of a motion vector from said candidate motion vectors (col. 3, lines 57-62).

Re claim 7, Ohsawa further teaches wherein said analysis includes a bit rate control (35 and 16 of fig. 1), and includes the taking of quantizer decisions (16 of fig. 1) appropriate to the maintenance of the selected bit rate.

Re claim 8, Ohsawa further teaches wherein plural bit rates are selected (16 of fig.1) and plural quantizer decisions are taken (quantizer step size).

Re claim 10, Ohsawa further teaches wherein said means for processing the coding decisions provides a representation of the coding decisions in the form of a compressed video

bit-stream lacking transform coefficients (the decisions are used for encoding without using transform coefficients, 13 of fig. 1).

Re claim 17, Ohsawa further teaches wherein said means for outputting processed coding decisions serves to modulate one or more least significant bits of video signal (the decisions inherently have one or more least significant bits).

Re claim 18, Ohsawa further teaches wherein the input video signal which is passed along decisions comprises means for modifying the un-encoded input video signal by adding the processed coding decisions (13a of fig. 1)

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Florentin et al (US 5,835,147) discloses a method for compression and decompression of a video signal.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung Vo whose telephone number is 571-272-7340. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tung Vo
Primary Examiner
Art Unit 2613